

Environmental Protection Agency

2200 Churchill Road, Springfield, Illinois 62706

EPA Region 5 Records Ctr.



393321

217/782-6762

Refer to: 11904006 -- Madison County
Granite City/Reilly Tar and Chemical Corporation
Permit No. 1983-1-DE-EXP

January 7, 1983

Reilly Tar and Chemical Corporation
151 North Delaware Street
Suite 1510
Indianapolis, Indiana 46204

Gentlemen:

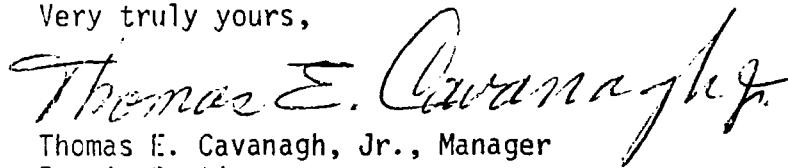
Experimental Permit is hereby granted to Reilly Tar and Chemical Corporation to develop a solid waste management facility to store on site generated hazardous waste in surface impoundments and in waste piles located on 37 acres in the SW 1/4 of the SE 1/4 of Section 19, Township 3 N., Range 9 W. of the 3rd Principal Meridian, Madison County, Illinois, all in accordance with the application and plans prepared by Dan Breeding, P.E.; said application dated October 8, 1982, consisting of 17 pages, two plan sheets, contingency plan and hydrogeological investigation and received by the Agency on October 12, 1982, groundwater sample analyses and a revised plan sheet received by the Agency on November 17, 1982 and a four page letter dated November 24, 1982 and received by the Agency on November 29, 1982.

This permit is issued subject to the standard conditions attached hereto and incorporated herein by reference and further subject to the following special conditions:

1. This is an experimental permit to develop the storage facilities; it is not a permit to operate. When development is completed you may apply for an operating permit by letter. Any operating permit that may be issued will be an experimental permit and will expire on April 1, 1984.
2. Before an Operating Permit will be issued a description of the financial arrangements made to insure funds for closure, as required by 35 Adm. Code 725.240 must be submitted.
3. This permit allows for the development of facilities to store on site generated wastes only.
4. Your groundwater monitoring program is hereby approved in accordance with Attachment A.

5. This Agency reserves the right to require installation of additional monitoring devices, to alter the selection of parameters to be analyzed and to alter monitoring frequencies as may be necessary to fulfill the intent of the Environmental Protection Act.
6. This permit is subject to review and modification by the Agency as deemed necessary to fulfill the intent and purpose of the Environmental Protection Act, and all applicable environmental rules and regulations.
7. This permit is issued with the expressed understanding that no process or contaminated storm water discharge to Waters of the State or to a sanitary sewer will occur from these facilities. If such discharge occurs, additional or alternate facilities shall be provided. The construction of such additional or alternate facilities may not be started until a permit for their construction has been issued by this Agency.
8. Any modification to the facility, treatment process, types or classes of wastes handled shall be the subject of an application for supplemental permit for site modification to this Agency.

Very truly yours,



Thomas E. Cavanagh, Jr., Manager
Permit Section
Division of Land Pollution Control

TEC/EPT/tk/20-21

Attachment

cc: DWPC
Region



Refer to: Site No. 11904006
Permit No. 1983-1-DE-EXP

ATTACHMENT A
WATER MONITORING PROGRAM

1. Monitoring points shall be installed at the following locations and shall be referenced as the Agency designation:

<u>Boring Number</u>	<u>Agency Designation</u>
MW-1, MW-2, MW-6, MW-7	G-101, G-102, G-106, G-107

2. Upon installation of all monitoring points, as-built diagrams shall be submitted to the Permit Section.
3. All borings not utilized as monitoring points in the Agency approved groundwater monitoring program shall be backfilled with concrete or a bentonite and soil mix.
4. The annular space (the space between the bore hole and the well casing) for a distance of 2 feet above the top of the screen must be sealed with a suitable material (e.g., cement grout or bentonite slurry) to prevent contamination of samples and the groundwater. Above this, boring cuttings shall be backfilled to within 2 feet of the surface. A concrete plug shall be placed from two feet to the surface.
5. The portion of the well casing, extending above the ground surface, must be protected so that it cannot be damaged or tampered with.
6. Wells shall be easily visible and identified with Agency monitoring point designation.
7. All monitoring points shall be maintained such that a sample may be obtained.



8. For sites accepting hazardous waste, the concentrations or value of the following parameters in the groundwater samples shall be sampled and analyzed quarterly during the first year.

Alkalinity, as CaCO ₃	Ammonia, as N
Arsenic (As)	Barium (Ba)
Boron (B)	Cadmium (Cd)
Calcium (Ca)	Chloride (Cl)
Chromium (Cr) (total)	Cyanide (CN)
COD	Copper (Cu)
Fecal coliform	Fluoride (F)
Hardness, as CaCO ₃	Iron (Fe)
Lead (Pb)	Magnesium (Mg)
Manganese (Mn)	Mercury (Hg)
Nickel (Ni)	Nitrate-Nitrite (N)
pH	Phenolics
Potassium (K)	R.O.E. (180°C)
Selenium (Se)	Silver (Ag)
Sodium (Na)	Sulfate (SO ₄)
Zinc (Zn)	Endrin
Gross Alpha	Gross Beta
Lindane	Methoxychlor
Radium	*Total Organic Carbon (TOC)
*Total Organic Halogen (TOX)	Toxaphene
2,4-D	2,4-5,T (Silvex)
	*Specific Conductance (SC)

*Denotes four replicate measurements required.

9. a. Elevation of the groundwater surface at each monitoring well must be determined each time a sample is obtained. This determination is to be made prior to any water being withdrawn from the monitor well.
- b. The temperature of the groundwater sample is to be determined and reported each time a sample is obtained.
- c. The height of the stick-up, as measured from ground level, and the depth to the bottom of the well, as measured from the top of the stick-up, is to be determined and reported each time a sample is obtained.



Page 3

10. After the first year, each monitoring point must be sampled quarterly and the samples analyzed for parameters as specified by the Agency.
11. The enclosed water monitoring instruction packet must be utilized in sampling and reporting under your approved groundwater monitoring program.
12. The schedule for submission of quarterly water monitoring results is as follows:

15th of January
15th of April
15th of July
15th of October

13. All certifications, logs, or reports which are required to be submitted to the Agency by the permittee should be mailed to the following address:

Illinois Environmental Protection Agency
Compliance Monitoring Section
Compliance Assurance Unit
2200 Churchill Road
Springfield, Illinois 62706

ET:jd/6093C/25-27

STANDARD CONDITIONS FOR CONSTRUCTION/DEVELOPMENT PERMITS
ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

July 1, 1979

The Illinois Environmental Protection Act (Illinois Revised Statutes, Chapter 111-1/2, Section 1039) grants the Environmental Protection Agency authority to impose conditions on permits which it issues.

These standard conditions shall apply to all permits which the Agency issues for construction or development projects which require permits under the Divisions of Water Pollution Control, Air Pollution Control, Public Water Supplies, and Land and Noise Pollution Control. Special conditions may also be imposed by the separate divisions in addition to these standard conditions.

1. Unless this permit has been extended or it has been voided by a newly issued permit, this permit will expire one year after date of issuance unless construction or development on this project has started on or prior to that date.
2. The construction or development of facilities covered by this permit shall be done in compliance with applicable provisions of Federal laws and regulations, the Illinois Environmental Protection Act, and Rules and Regulations adopted by the Illinois Pollution Control Board.
3. There shall be no deviations from the approved plans and specifications unless a written request for modification of the project, along with plans and specifications as required, shall have been submitted to the Agency and a supplemental written permit issued.
4. The permittee shall allow any agent duly authorized by the Agency upon the presentation of credentials:
 - a. to enter at reasonable times the permittee's premises where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit.
 - b. to have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit.
 - c. to inspect at reasonable times, including during any hours of operation of equipment constructed or operated under this permit, such equipment or monitoring methodology or equipment required to be kept, used, operated, calibrated and maintained under this permit.

W A T E R M O N I T O R I N G
I N S T R U C T I O N P A C K A G E

- Water Sampling Procedures
- Instructions for Completing Monitoring Analysis Forms
- Chemical Analysis Forms (LPC-8)

WATER SAMPLING PROCEDURES

The enclosed materials are prepared to inform owners/operators of treatment, storage and disposal facilities of proper water sampling procedures. These procedures are to be used by you in complying with your water monitoring requirements. It is expected that your compliance with the procedures will help in obtaining analytical results consistent and comparable with those obtained by the Agency.

Three main areas of sampling procedures are presented: 1) volume removal, 2) filtering, and 3) sample preservation and analyses.

1. Volume Removal

One well casing volume of water is to be removed from a monitor well prior to obtaining a water sample. This is to remove stagnant water in the well and obtain water more representative of the monitored aquifer.

In order to determine the amount of water in a monitoring well, water level and well depth measurements must be taken before sampling. Depth to water and stick up are to be recorded on the sample analysis sheet (LPC-8). The inside diameter (I.D.) of the well casing must be known. To find the number of feet of water in a well, the depth to water is subtracted from the total depth of the well. One volume can be determined by using the enclosed chart or by using the formula $V = \pi r^2 h (7.48)$ where,

r = radius of the well casing (inside), in feet
 h = number of feet of water in the well casing
7.48 = conversion factor (cubic feet to gallons)
 V = volume, in gallons

The chart can be used by finding the number of feet of water in the well on the left hand column on the chart. Then, read horizontally across the chart until you intersect the correct well I.D. line. Then read vertically down to determine the number of gallons of water in the well (one volume). For example (see chart), a well with an I.D. of $2\frac{1}{2}$ inches and 24 feet of water would contain approximately 6 gallons of water.

After removing the required volume of water from a well, the well should be sampled while it is recharging. The recharge rate may vary from nearly instantaneous to a period of days.

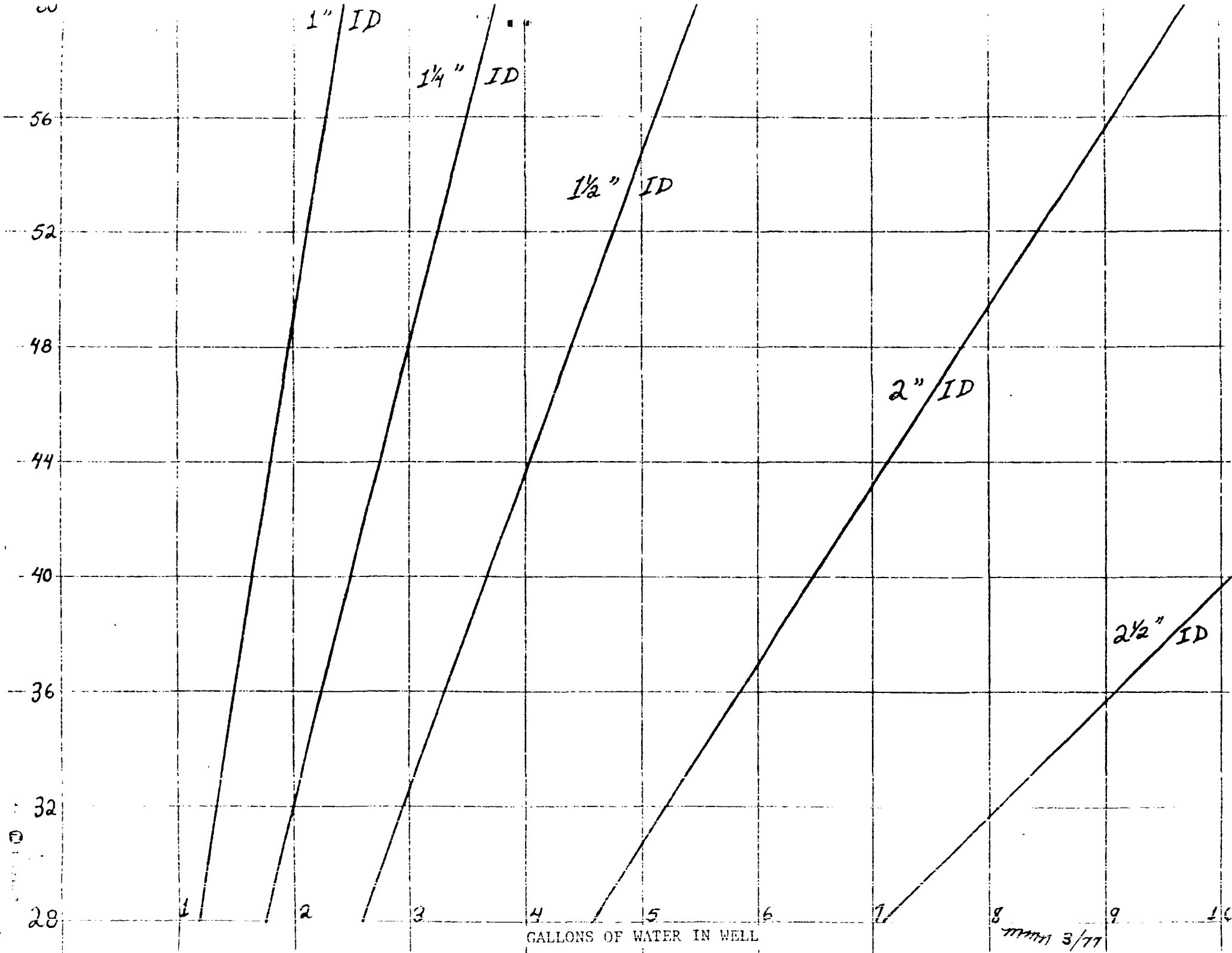
2. Filtering

All groundwater samples to be analyzed for inorganic parameters are to be filtered.

1. Methods for Chemical Analysis of Water and Wastes, USEPA-600/4-79-020, March 1979; or
2. Standard Methods for the Examination of Water and Waste Water, 15th Edition, 1980.

Water samples collected by you or for you are to be analyzed in a private laboratory of your choice. The laboratory chosen by you must employ the analytical methods outlined in one of the references listed above.

If someone else (consulting firm, laboratory, etc.) is collecting and analyzing water samples for you, please pass a copy of these procedures on to them so that they can be complied with.



INSTRUCTIONS FOR SPECIFIC ITEMS

1. Ignore "LPCSM010" (space 1-8) and all other "LPC..." codes. These are for the keypunchers' use.
2. Site Inventory Number (space 9-16). Every site will have its own Agency-assigned 8 digit number.
3. Monitor Point Number (space 17-20). Every site monitoring point will have its own Agency assigned 4 digit code number which must be recorded for each sample submitted. The Permit Section will assign monitoring point numbers upon issuance of the Permit.

Note that private well owner, stream, spring and impounded water (e.g., pond, lake) samples should be described by name in the space provided.

4. Date (space 21-26). This is the date the sample is collected. For example, February 2, 1983, will become 0 2 0 2 8 3, not 2 / 2 / 8 3.
5. County, Location, Responsible Party. This is the file heading which the Agency has assigned to the site.
6. Region (space 27). This is an Agency-assigned letter referring to 1 of 4 regions in which the site is located.
7. Legal or Illegal (space 28). Indicate if this is a legal (by IEPA permit or IPCB variance) or illegal site by placing the proper number in the space provided.
8. Board Order (space 29). If there is an Illinois Pollution Control Board Opinion and Order concerning the site, place an "X" in this space.
9. For individual sites using this form to comply with quarterly water monitoring requirements, the above information except for the date (items 2, 3 and 5-8 above) will be preprinted on the analysis form. It will be the responsibility of the site operator to complete the date the sample is collected and the rest of the form, and see that the form and sample are delivered to a lab to be analyzed for the proper parameters. The proper parameters for analyses are stated in the Permit. It will also be the responsibility of the site operator and/or his designated lab to match up the correct monitor point number (found in space 17-20) with the correct water sample.
10. Time. Record the time the sample is collected. Do not forget to indicate a.m. or p.m.

18. Collector Comments. Record the total depth measurement of the well (nearest 0.1 foot) as measured from the top of the stick-up. This also refers to the condition of the well casing, plus any problems or observations when the sample is collected (e.g., well has very little water in it, casing cracked, well flooded, cap off well, stream is at a very low flow, well has a fast recharge, etc.).
19. Collected By. The person collecting the sample shall sign the analysis form where indicated. Non-Agency personnel shall indicate their title and/or the company they represent.
20. Transported By. The person transporting the sample to the laboratory shall sign the analysis form where indicated. If the sample is mailed to the laboratory (not recommended) indicate this by signing U.S. Mail.
21. Parameters For Analyses. Place an "X" in the box to the left of the parameter. The parameters for analyses are stated in the Permit.

INSTRUCTIONS FOR LABORATORIES

It is recommended that the procedures used in analyzing the water samples be as outlined in the 15th edition of Standard Methods for the Examination of Water and Wastewater, 1980. Values exceeding the number of places shown are to be reported in the lab comments section. Also, any test requested but not run should be explained in the lab comments section.

The lab comments section will be computerized, so use care in filling this section out. Print only one character to a dash and print legibly. The spaces provided in this section will be printed out as a single line; therefore, be careful in using the correct spacing. Following are several examples of the use of this section:

1. Lab analyzes for COD and finds it to be 13,000 ppm. This is larger than the spaces provided, therefore, it would be reported in the lab comments section.

C O D - 1 3 0 0 0 0
(27) (36)

2. Lab is asked to analyze for cyanide, however, it finds this is not possible due to chlorine interference.

C N N I A - c h l
(27) (36)

d r i n e - i n t e
(37) (46)

r f e r e n c e
(47) (56)